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Cherry Hill, NJ 08034
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February 3, 1999

In re: Patent Application of
HAROLD L. SWINDELL, III
Our File No. 5451

MAILED ON February 3, 1999
BY EXPRESS MAIL
NO. EE354882298US

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

On behalf of the Applicant, we are pleased to present herewith application for Letters Patent entitled "Roof or Access Hatch Safety Railing System," including the specification, claims, declaration, petition and power of attorney and three sheets of informal drawings. Also enclosed is an original executed verified statement claiming small entity status.

Even further, we are enclosing an original executed assignment together with a recordation form cover sheet.

Our check in the amount of $420 covering the filing fee of $380 and the assignment recording fee of $40 is attached. Please charge any deficiency or credit any overpayment of these fees to the undersigned's deposit account No. 12-1023.

Respectfully submitted,

Norman E. Lehrer

NORMAN E. LEHRER
Registration No. 26,561

Applicant or Patentee: Harold L. Swindell, III Attorney's
Serial or Patent No.: Docket No.: 5451
Filed or Issued:
For: Roof or Access Hatch Safety Railing System

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9 (f) and 1.27 (c)) — SMALL BUSINESS CONCERN

I hereby declare that I am
[ ] the owner of the small business concern identified below:
[X] an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN Nesea Construction, Incorporated
ADDRESS OF CONCERN 4201 Church Road, Suite 13
Mt. Laurel, NJ 08054

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9 (d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled "Roof or Access Hatch Safety Railing System" by inventor(s) Harold L. Swindell, III described in

[X] the specification filed herewith
[ ] application serial no. , filed .
[ ] patent no. , issued .

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9 (d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9 (d) or a nonprofit organization under 37 CFR 1.9 (e).

*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME
ADDRESS
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

NAME
ADDRESS
[ ] INDIVIDUAL [ ] SMALL BUSINESS CONCERN [ ] NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28 (b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Denise DuBois
TITLE OF PERSON OTHER THAN OWNER President
ADDRESS OF PERSON SIGNING 4201 Church Road, Suite 13
Mt. Laurel, NJ 08054

SIGNATURE DATE 2/2/99

ROOF OR ACCESS HATCH SAFETY RAILING SYSTEM

Background of the Invention

The present invention is directed toward a safety railing and more particularly, toward a railing which is attached to an access hatch such as a roof access hatch in order to allow a person to climb safely onto a roof or platform from a roof hatch ladder.

Falls are a major cause of injuries in the workplace. In particular, falls from roof or access hatch ladders often result in permanent injury or death. In light of these safety hazards, OSHA now requires roof hatch safety railings. However, railings for attachment to roof hatches are virtually non-existent. Railings in other settings are well known. There remains a need for safety railings for access hatches and particularly, for roof hatches.

U.S. Patent No. 4,546,855 to Lyons discloses a safety extension that can be mounted to the inside of a passageway which has an opening. A ladder extends through the passageway and is mounted to a wall of the passageway. The safety extension includes a rod received in a sleeve. The sleeve may be attached to the ladder or to a wall of the passageway. The safety extension may be used in manholes or hatchways and is grasped by a person when entering or exiting the passageway. This safety extension must be engaged before each use in order to be functional. Furthermore, this safety extension does not meet the requirements for roof hatch safety railings set forth by OSHA.

U.S. Patent No. 3,598,200 to Thompson discloses a sleeve attached to the rungs of a manhole ladder. The sleeve has a slidable rod therein which is extendable from the manhole. The rod acts as a vertical railing or guide for the worker on the ladder. This type of railing would not be suitable for use with a roof hatch ladder. Also, this type of railing does not conform with the current OSHA standards.

Summary of the Invention

The present invention is designed to overcome the deficiencies of the prior art discussed above. It is an object of the present invention to provide a safety railing which increases a person's safety when he or she is climbing from a stationary ladder to a platform through an access hatch.

It is another object of the railing of the present invention to act as an extension of a ladder leading to a roof or access hatch.

It is a further object of the invention to provide a safety railing which is easily and permanently attached to an existing roof hatch.

In accordance with the illustrative embodiments demonstrating features and advantages of the present invention, there is provided a roof or access hatch safety railing for increasing a person's safety as he or she climbs onto the roof or other platform of a building from an access or roof hatch. The safety railing includes one or more poles where one pole is attached to the right side of a roof or access hatch and the other pole is attached to the left side of the roof hatch. A person may grab onto the

poles as he or she climbs from the roof hatch ladder, through the hatch, and onto the roof or platform. The poles are also spaced away from the hatch, thereby allowing enough clearance for a lid of the hatch to close and cover the hatch. The railing may be modified to accommodate various types and sizes of roof or access hatches.

Other objects, features, and advantages of the invention will be readily apparent from the following detailed description of preferred embodiments thereof taken in conjunction with the drawings.

Brief Description of the Drawings

For the purpose of illustrating the invention, there is shown in the accompanying drawings forms which are presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

Figure 1 is a perspective view of the railing of the present invention attached to a roof hatch;

Figure 2 is partial cross-sectional view of the present invention taken along line 2-2 of Figure 1;

Figure 2a is a partial side view of the left-handed pole of the present invention with the roof hatch in a closed position;

Figure 3 is a perspective view of the right-handed pole of the railing of the present invention;

Figure 4 is a perspective view of the left-handed pole of the railing of the present invention;

Figure 5 is a perspective view of the right-handed pole of a second embodiment of the present invention; and

Figure 6 is a perspective view of the left-handed pole of a second embodiment of the present invention.

Detailed Description of the Preferred Embodiment

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in Figure 1 a roof hatch safety railing constructed in accordance with the principles of the present invention and designated generally as 10. It must be understood that a roof hatch is being shown as the preferred embodiment. The invention is applicable to substantially any access hatch which allows a person to gain access to a roof, attic or other floor or substantially any horizontal support surface from below.

In the first embodiment of the present invention, the roof hatch safety railing essentially includes a right-handed pole 12 and a left-handed pole 14. (While in the preferred embodiment two poles are described, it should be realized that one pole may also be used.) Right-handed pole 12 has a curved handle 16, an elongated vertical section 18 extending from the handle 16, and a bracket 20 attached to the lowermost

end 22 of the vertical section 18. Likewise, left-handed pole 14 has a curved handle 24, an elongated vertical section 26 extending from the handle 24, and a bracket 28 attached to the lowermost end 30 of the vertical section 26. Brackets 20 and 28 are attached or mounted to vertical sections 18 and 26, respectively, by any means known in the art, for example, by welding. Poles 12 and 14 may be formed from steel, fiberglass, or any material of comparable strength.

Right-handed bracket 20 is formed in a substantially L-shape with an elongated lateral leg 32 having a first end 34 and a second end 36 and an elongated, outwardly extending longitudinal leg 38 having a first end 40 and a second end 42 at a right angle to leg 32. (See Figure 3.) Left-handed bracket 28 is formed in a substantially backwards L-shape with an elongated lateral leg 44 having a first end 46 and a second end 48 and an elongated, outwardly extending longitudinal leg 50 with a first end 52 and a second end 54. (See Figure 4.) The junction 56 of lateral leg 32 and longitudinal leg 38 of right-handed bracket 20 and the junction 58 of lateral leg 44 and longitudinal leg 50 of left-handed bracket 28, however, do not form perfect ninety degree corners, respectively. That is, second end 36 of lateral leg 32 and second end 42 of longitudinal leg 38 of right-handed bracket 20 are slightly bent outwardly so that a space 60 is created in order to accommodate any excess roofing material or bulging 62, such as, caulking or metal stripping, which is usually found in the corners of roof hatches. (See Figure 2.) Likewise, second end 48 of lateral leg 44 and second end 54 of longitudinal leg 50 of left-handed bracket 28 are slightly bent outwardly so that a space 64 is created.

Mounted near first end 34 of lateral leg 32 of right-handed bracket 20 are two extension flanges 66a and 66b which form a triangle with lateral leg 32 of right-handed bracket 20. Similarly, mounted near first end 46 of lateral leg 44 of left-handed bracket 28 are two extension flanges 68a and 68b which form a triangle with lateral leg 44 of left-handed bracket 20. Vertical section 18 of right-handed pole 12 is attached to the lateral leg 32 of right-handed bracket 20 at the junction 70 (or apex of the triangle) of extension flanges 66a and 66b and vertical section 26 of left-handed pole 14 is attached to lateral leg 44 of left-handed bracket 28 at the junction 72 of extension flanges 68a and 68b. (See, for example, Figure 4.) Also, right-handed bracket 20 has holes 74a-74h and left-handed bracket 28 has holes 76a-76h, for example, through which bolts 78a-78f and bolts 80a-80f may be inserted, respectively, in order to secure the poles 12 and 14 to base member 82 of roof hatch 84, as will be described in more detail below. As can be clearly seen in the Figures, base member 82 extends upwardly from the level of the roof or other horizontal support surface.

In the second embodiment of the present invention the roof hatch safety railing essentially includes a right-handed pole 112 and a left-handed pole 114. Right-handed pole 112 has a curved handle 116, an elongated vertical section 118 extending from the handle 116, and a bracket 120 attached to the lowermost end 122 of the vertical section 118. Likewise, left-handed pole 114 has a curved handle 124, an elongated vertical section 126 extending from the handle 124, and a bracket 128 attached to the lowermost end 130 of the vertical section 126. As in the first embodiment, brackets 120 and 128 are attached or mounted to vertical sections 118

and 126, respectively, by any means known in the art, for example, by welding. Poles 112 and 114 may be formed from steel or material of comparable stength.

Right-handed bracket 120 is formed in a substantially L-shape with an elongated lateral leg 132 having a first end 134 and a second end 136 and an elongated, outwardly extending longitudinal leg 138 having a first end 140 and a second end 142, at a right angle to leg 132. (See Figure 5.) Left-handed bracket 128 is formed in a substantially backwards L-shape with an elongated lateral leg 144 having a first end 146 and a second end 148 and an elongated, outwardly extending longitudinal leg 150 having a first end 152 and a second end 154. (See Figure 6.) The junction 156 of the lateral leg 132 and longitudinal leg 138 of bracket 120 and the junction 158 lateral leg 144 and longitudinal leg 150 of bracket 128, again, do not form perfect ninety degree corners, respectively, rather, the corners are curved. That is, second end 136 of lateral leg 132 and second end 142 of longitudinal leg 138 of bracket 120 are slightly curved outwardly so that a space 160 is created in order to accommodate any excess roofing material or bulging as in the first embodiment. Likewise, second end 148 of lateral leg 144 and second end 154 of longitudinal leg 150 of bracket 128 are slightly curved outwardly so that a space 164 is created.

In this embodiment, unlike the first embodiment, vertical section 118 of pole 112 is attached at the inside junction 166 of the lateral leg 132 and longitudinal leg 138 of bracket 120 and vertical section 126 of pole 114 is attached at the inside junction 168 of the lateral leg 144 and longitudinal leg 150 of bracket 128. Bracket 120 has holes 174a-174e and bracket 128 has holes 176a-176e, for example, whereby bolts

may be inserted therein in order to secure the poles 112 and 114 to the base member of a roof hatch. The purpose of placing vertical sections 118 and 126 of poles 112 and 114, respectively, at the junctions 166 and 168, respectively, is to accommodate smaller roof hatches and to meet OSHA requirements, as will be discussed in greater detail below. Furthermore, by placing the poles at the junctions, the lid of a roof hatch has enough clearance to close, thereby covering the hatch.

In order to describe the method of installing the safety railing of the present invention, the first embodiment will be used to illustrate. It should be noted, however, that the method of installation is the same for both embodiments.

Right-handed pole 12 is positioned on the right corner 86 of the base member 82 of the roof or access hatch 84 so that the longitudinal leg 38 of bracket 20 is positioned against the right side 88 of base member 82 of the roof hatch 84 and the lateral leg 32 of bracket 20 is positioned against the right front 90 of the base member 82 of roof hatch 84. (See Figure 1.) Bolts 78a-78f are inserted into holes 74a-74f, respectively, and are used to fasten the bracket 20 to the base member 82 of the roof hatch 84. The left-handed pole 14 is positioned and fastened to the roof hatch base member 82 in the same manner, except that pole 14 is attached to the left corner 92 of the roof hatch 84. That is, left-handed pole 14 is positioned on the left corner 92 of base member 82 of the roof or access hatch 84 so that the longitudinal leg 50 of the bracket 28 is positioned against the left side 94 of the base member 82 of the roof hatch 84 and the lateral leg 44 of the bracket 28 is positioned against the left front 96 of the base

member 82 of roof hatch 84. (See Figure 1.) Bolts 80a-80f are inserted into holes 76a-76f and are used to fasten the bracket 28 to the base member 82 of the roof hatch 84.

Vertical sections 18 and 26 of poles 12 and 14, respectively, are positioned on their respective brackets 20 and 28 so that the lid 98 of the roof hatch 84 has enough clearance to close, as seen in Figure 2a. That is, in both of the embodiments the longitudinal legs of the poles are positioned on their respective brackets, either by being mounted on the extension flanges, as seen in the first embodiment, or by being mounted at the inside junctions of the lateral leg and longitudinal leg of the bracket, as seen in the second embodiment, so that the lid of the hatch has enough clearance.

The safety railing of the present invention not only affords protection for people accessing a roof, it is constructed in such a manner so as to meet OSHA requirements. For example, each of the handles of the poles extend up to 42 inches from the roof surface. Also, the poles are spaced approximately between 24-30 inches apart. That is, for larger roof or access hatches, the poles may be spaced closer together, as in the first embodiment, than for smaller hatches, as in the second embodiment. However, the distance between the two poles should not be less than 24 inches. That is, the poles of the railing in the first embodiment may be adjusted along the brackets in order to accommodate the roof hatch and to comply with OSHA requirements. The poles of the railing of the second embodiment, however, are affixed in the corners of the brackets in order to accommodate a smaller roof hatch.

Also, the railing surface is finished and the ends of the handles are covered or otherwise sealed so that no sharp or projecting edges are present, thereby preventing injury or torn clothing. Furthermore, the railing is capable of withstanding a force of at least 200 pounds applied within two inches of the top in any direction. While it is not an OSHA requirement, the railing may also be coated or painted yellow to further increase safety.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and accordingly, reference should be made to the appended claims rather than to the foregoing specification as indicating the scope of the invention.

I CLAIM:

1. The combination of an access hatch and a safety railing for increasing a person's safety as the person climbs onto the horizontal support surface of a building or any other platform comprising:

an access hatch having a base member, said base member extending upwardly from said horizontal support surface or said platform and

a safety railing including at least one pole extending upwardly from said base member of said access hatch.

2. The combination of an access hatch and a safety railing of Claim 1 wherein said at least one pole includes a pair of poles including a right-handed pole and a left-handed pole.

3. The combination of an access hatch and a safety railing of Claim 2 wherein said right-handed pole includes a handle, an elongated vertical section, and a bracket attached to said vertical section.

4. The combination of an access hatch and a safety railing of Claim 2 wherein said bracket is attached to said base member.

5. The combination of an access hatch and a safety railing of Claim 3 wherein said bracket includes at least two extension flanges joined together.

6. The combination of an access hatch and a safety railing of Claim 5 wherein said pole is attached to said bracket where said extension flanges are joined together.

7. The combination of an access hatch and a safety railing of Claim 3 wherein said bracket has a lateral leg with a bent end and a longitudinal leg with a bent end, said legs joined at said bent ends.

8. The combination of an access hatch and a safety railing of Claim 3 wherein said bracket has a lateral leg with a curved end and a longitudinal leg with a curved end, said legs of said bracket forming a junction at said curved ends.

9. The combination of an access hatch and a safety railing of Claim 8 wherein said vertical section of said pole is attached at said junction.

10. The combination of an access hatch and a safety railing of Claim 2 wherein said left-handed pole includes a handle, an elongated vertical section, and a bracket attached to said vertical section.

11. The combination of an access hatch and a safety railing of Claim 10 wherein said bracket includes at least two extension flanges joined together.

12. The combination of an access hatch and a safety railing of Claim 11 wherein said pole is attached to said bracket where said extension flanges are joined together.

13. The combination of an access hatch and a safety railing of Claim 10 wherein said bracket has a lateral leg with a curved end and a longitudinal leg with a curved end, said legs of said bracket forming a junction at said curved ends.

14. The combination of an access hatch and a safety railing of Claim 13 wherein said vertical section of said pole is attached at said junction.

15. The combination of an access hatch and a safety railing of Claim 10 wherein said bracket has a lateral leg with a bent end and a longitudinal leg with a bent end, said legs joined at said bent ends.

16. The combination of an access hatch and a safety railing of Claim 10 wherein said bracket is attached to said base member.

17. The combination of an access hatch and a safety railing of Claim 1 wherein said access hatch is a roof hatch.

ROOF OR ACCESS HATCH SAFETY RAILING SYSTEM

Abstract of the Disclosure

A roof hatch safety railing for increasing a person's safety as he or she climbs onto a roof or platform of a building from a roof or access hatch is disclosed. The safety railing includes two poles where one pole is attached to the right side of a roof hatch and the other pole is attached to the left side of the hatch. A person may grab the poles as he or she climbs from the roof or access hatch ladder, through the hatch, and onto the roof or platform. The poles are also spaced away from the hatch, thereby allowing enough clearance for a lid of the hatch to close and cover the hatch. The railing may be modified to accommodate various types and sizes of roof or access hatches.

Fig. 1

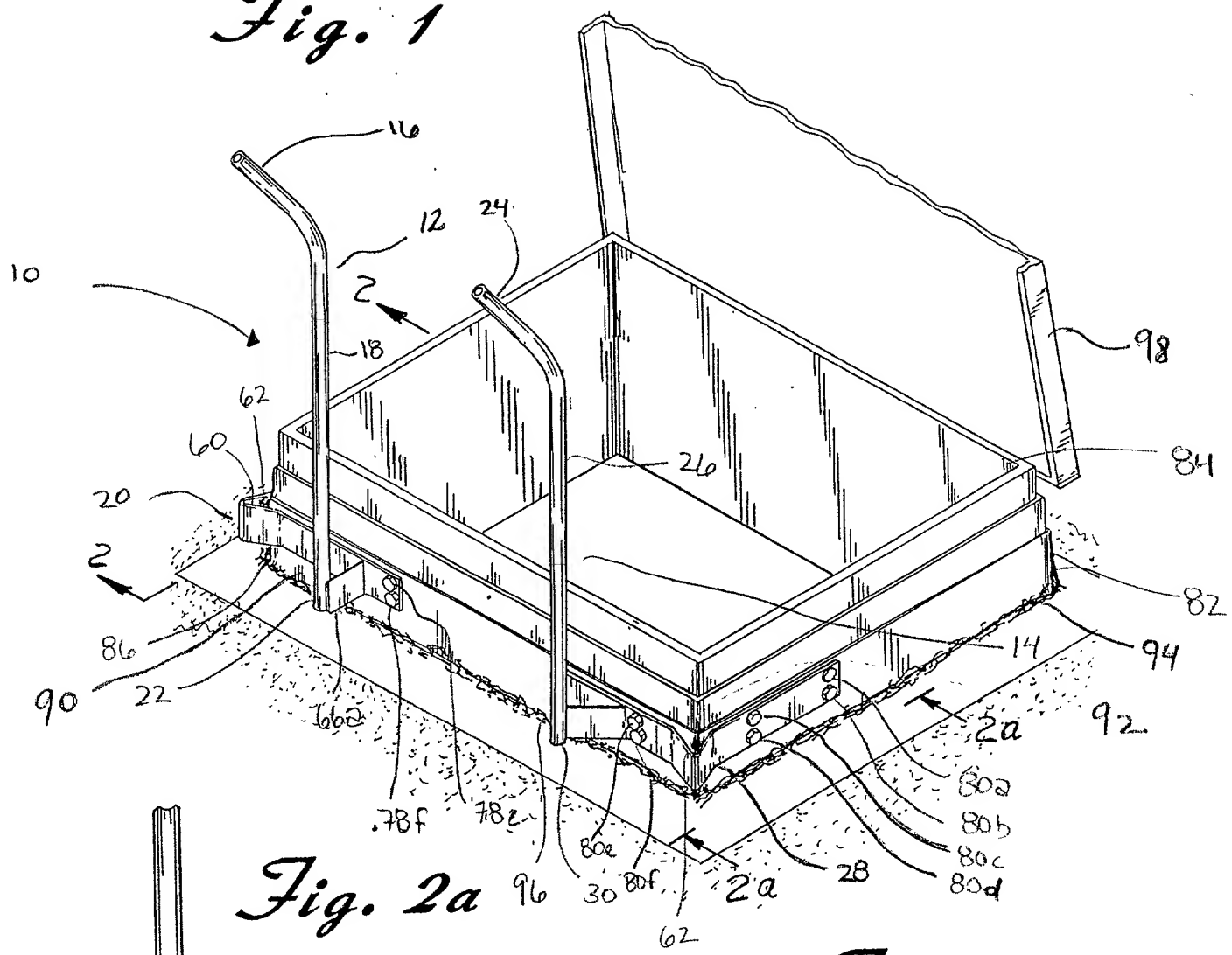


Fig. 2a

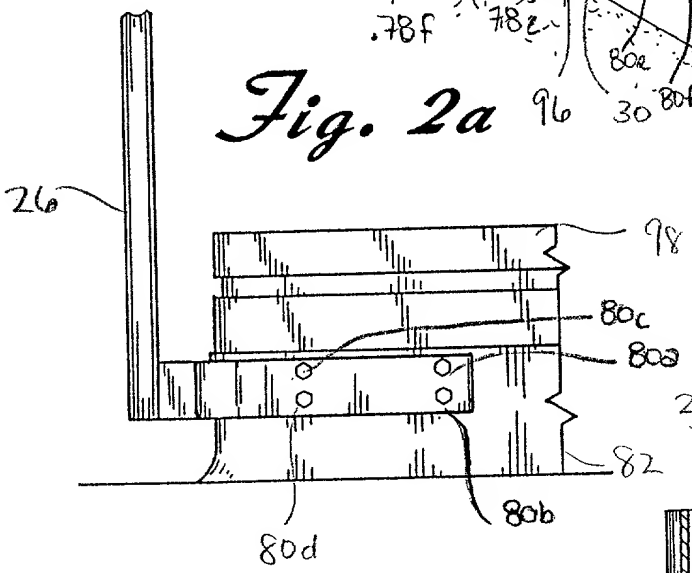


Fig. 2

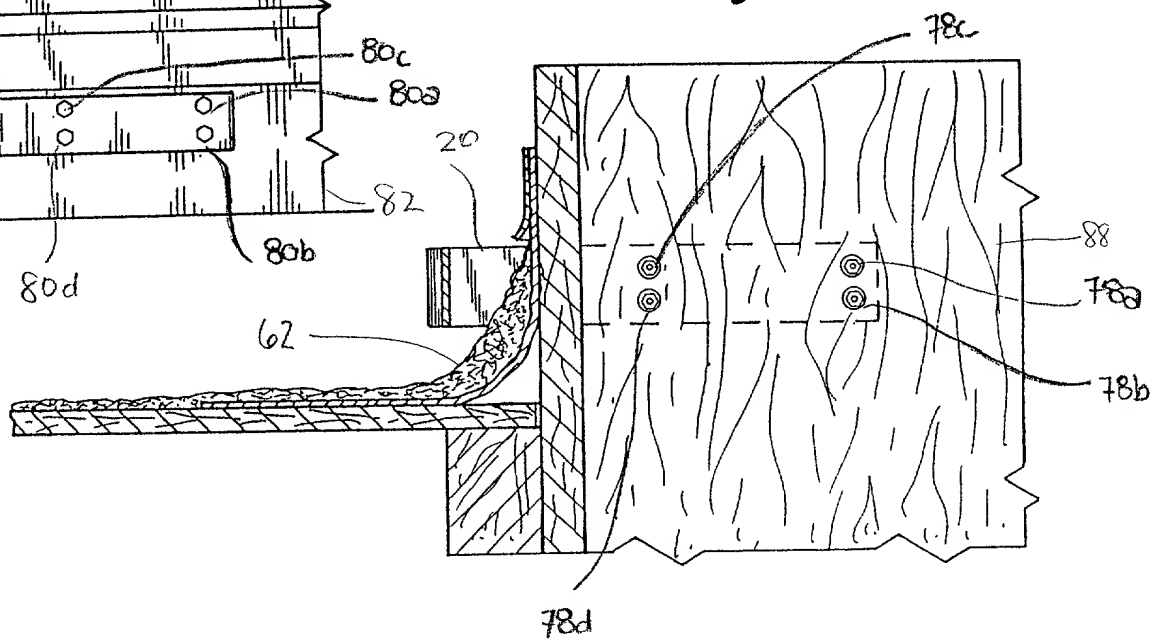
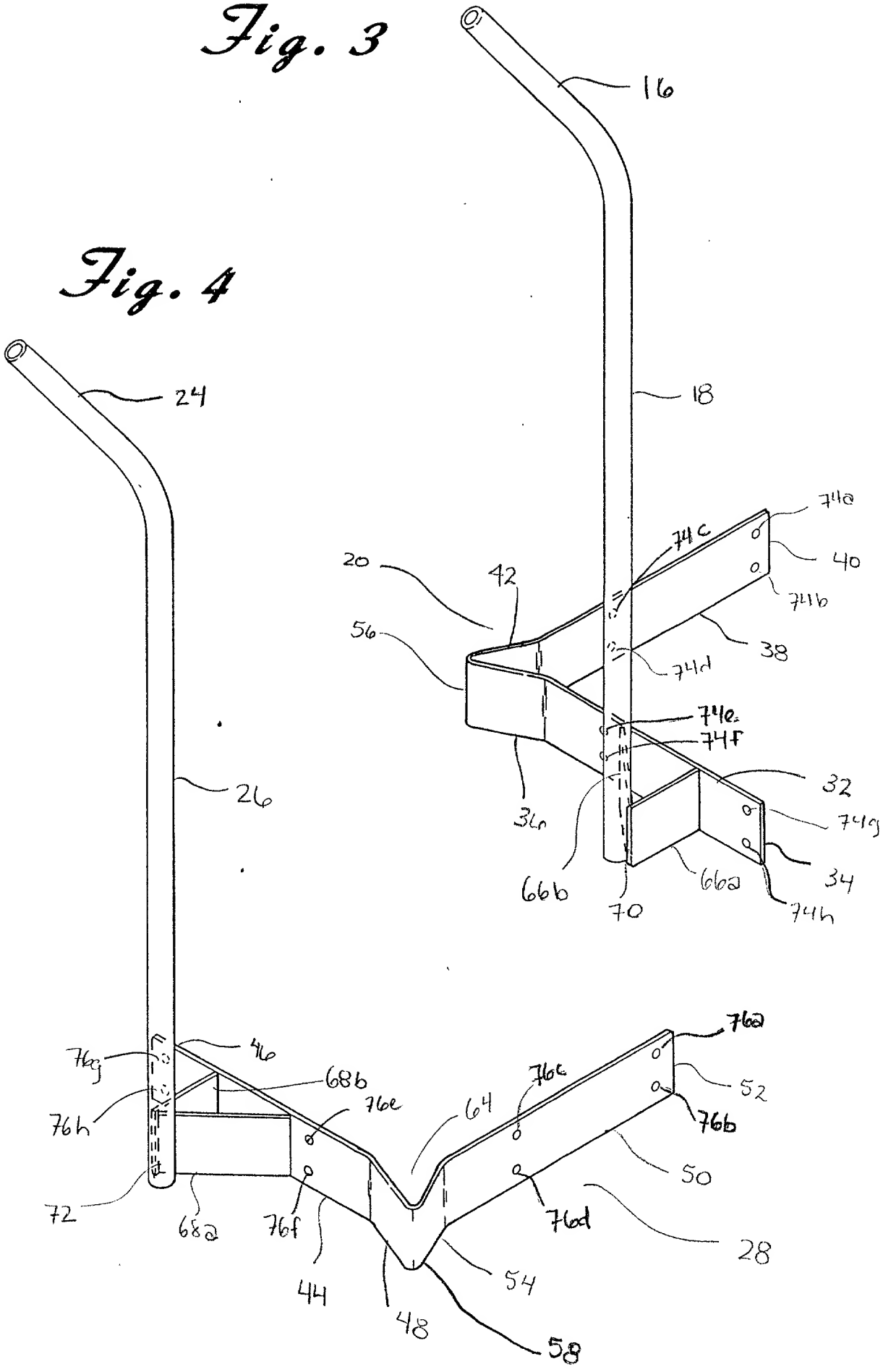


Fig. 3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76b
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Fig. 4

Fig. 5

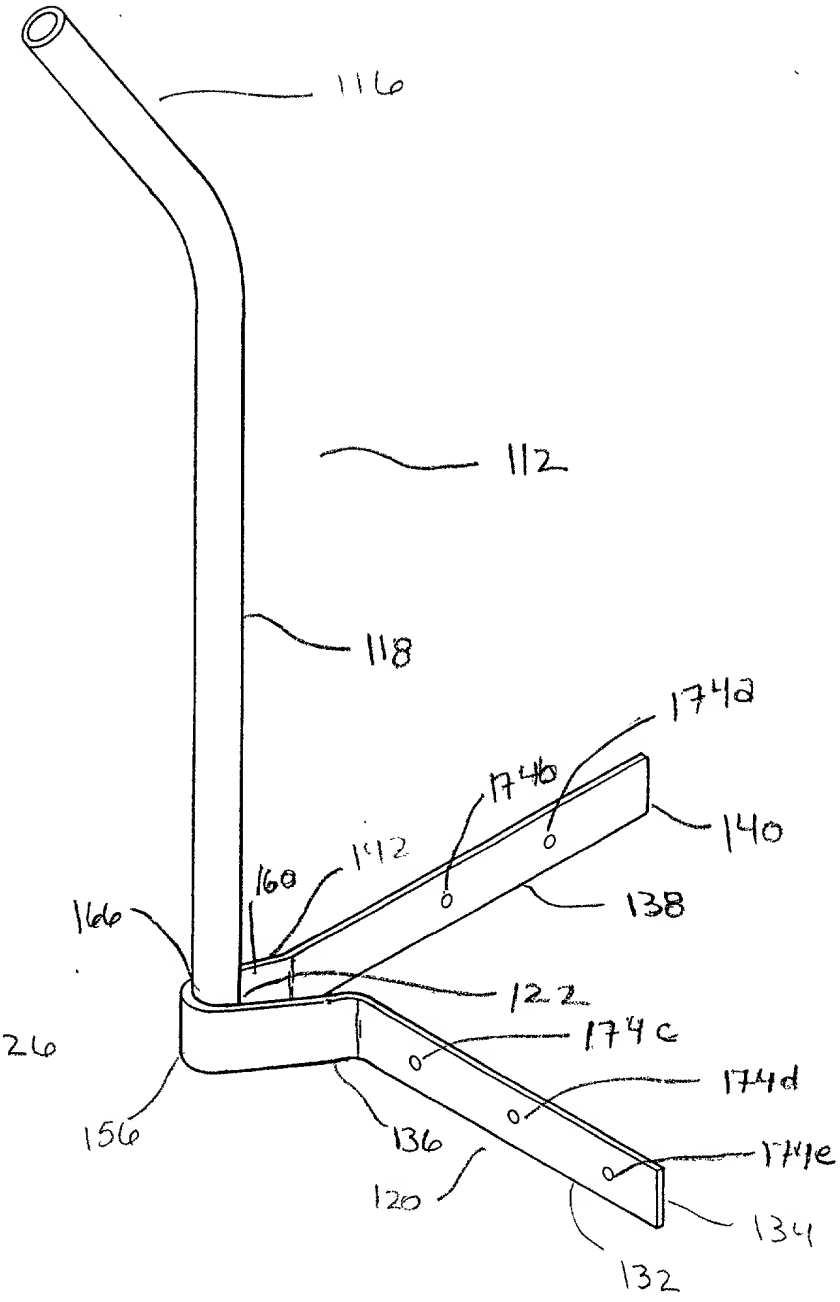
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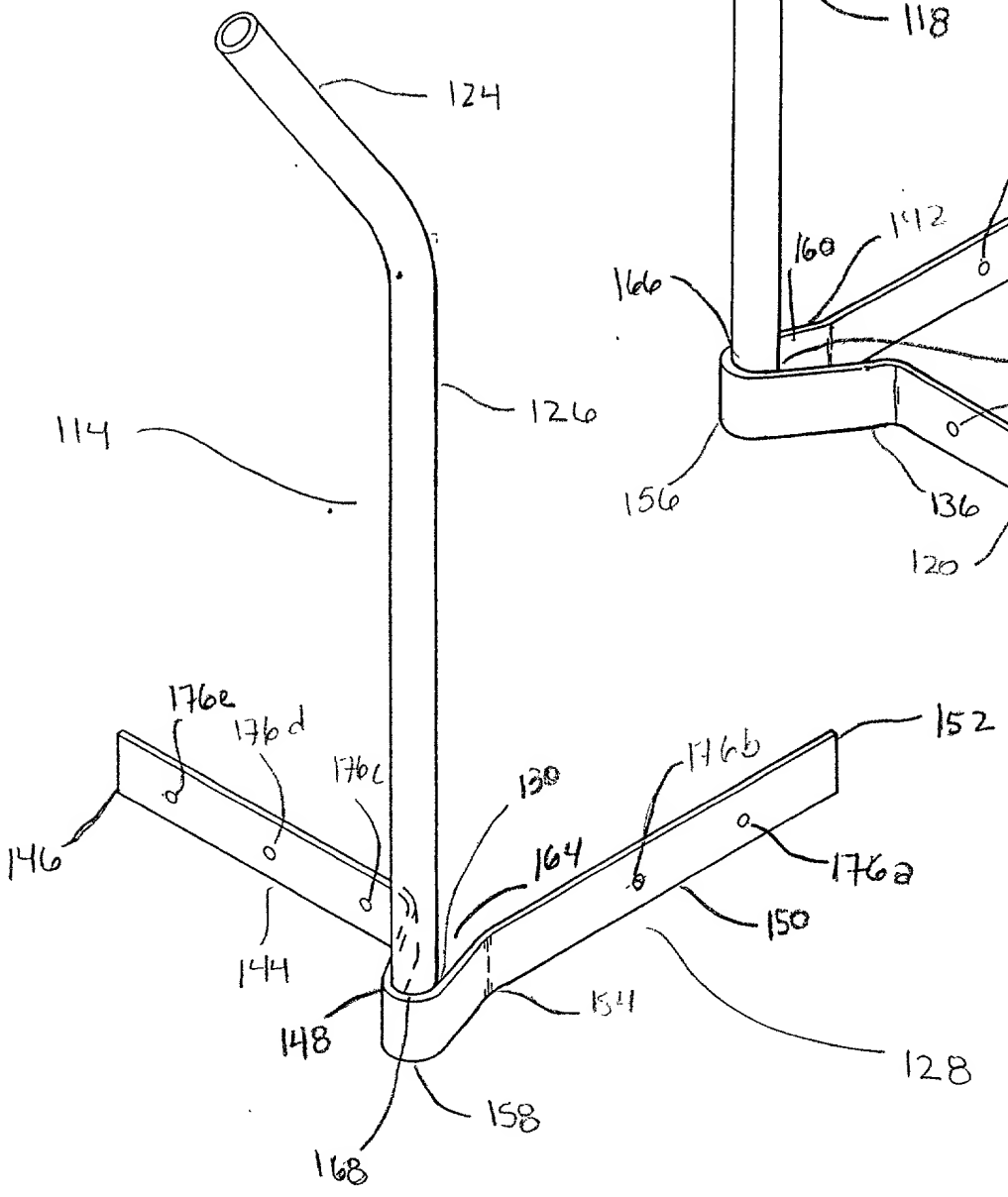
Fig. 6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DECLARATION

I, Harold L. Swindell, III, hereby declare that:

I am a citizen of the United States, residing in Mt. Laurel, New Jersey, and having a post office address of 4201 Church Road, Suite 13, Mt. Laurel, New Jersey 08054.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled "Roof or Access Hatch Safety Railing System," the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I have not previously filed any foreign applications for patent or inventor's certificate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

<u>POWER OF ATTORNEY</u>

I hereby appoint Norman E. Lehrer, Registration No. 26,561, Vanitha M. Elgart, Registration No. 41,445, and Franklyn Schoenberg, Registration No. 22,208, whose address is 1205 North Kings Highway, Cherry Hill, New Jersey 08034, and whose telephone number is 609-429-4100, as my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

<u>PETITION</u>

Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, declaration, power of attorney and this petition.

Dated: 2/2/99

HAROLD L. SWINDELL, III